A4175-1

annual data 1993

COPPER • BRASS • BRONZE

copper supply & consumption

1972-1992

COPPER DEVELOPMENT ASSOCIATION INC.

Preface

Statistical data on the supply and consumption of copper and copper alloys in the United States are available from many governmental and private sources. In this report original data from these sources are brought together and rationalized by CDA and American Bureau of Metal Statistics Inc. (ABMS) to provide a set of data on U.S. copper supply and consumption that is both consistent and accurate in all aspects from mine to end-use market.

The main sources of information assembled here are the Bureau of Mines in the U.S. Department of the Interior, the Bureau of the Census in the U.S. Department of Commerce, and Copper Development Association Inc. Where data from different sources are conflicting, and where original data appear to be in error, the best judgment has been applied. General sources are shown in the tables throughout the report. Those interested to know the specific sources of any of the data should contact CDA.

The statistics are arranged in a logical sequence to trace the flow of copper in the U.S. economy from mining and scrap collection through smelting, refining and ingot making to the wire rod and wire mills, brass mills, and foundries and then on to the final end-use markets. This flow is shown schematically on pages 4-5. On this schematic flowsheet the major statistics of copper supply and consumption in the United States for 1992 appear. Along with each major statistic on the chart, a reference is shown. This reference identifies the table in the report where details on that item, from 1972 through 1992, will be found. Most data for 1992 are preliminary.

There are four major tables in the report. *Table 1* covers the supply of primary copper. *Table 2* presents data on the supply of copper from secondary sources. In *Table 3,* statistics on the consumption of primary and secondary metals by mills, foundries and other industries are summarized. These three tables are provided by ABMS. Finally, *Table 4* details the supply of mill, foundry and powder products and their consumption in the five end-use market areas. In each of these tables, additions to the flow (such as net imports) are indicated as positive numbers, while subtractions from the flow (such as melting losses or net additions to stocks) are shown as negative numbers.

The arrangement of the data in the report can be illustrated with an example. Consider *Mine Production,* the upper left-hand box in the flowsheet on page 4. As shown in the box, mine production of copper in the United States totaled 1,940.6 thousand short tons in 1992. Beneath this figure a number appears referring to *Table 1, Item 1,* abbreviated *1 (1)*. This means that in *Table 1,* on Line (1), mine production is shown for the full period 1972 through 1992. In *Table 1,* on Line (1), a further reference will be found after the item heading *Mine Production*, directing the reader to page 7. This reference means that further details on mine production appear on page 7. In fact, on page 7, a table entitled *Table 1, Item 1* presents the data on mine production by state for 1972 through 1992. In this way all the data on supply and consumption appear in logical sequence proceeding through the report, eliminating the need for explanatory text.

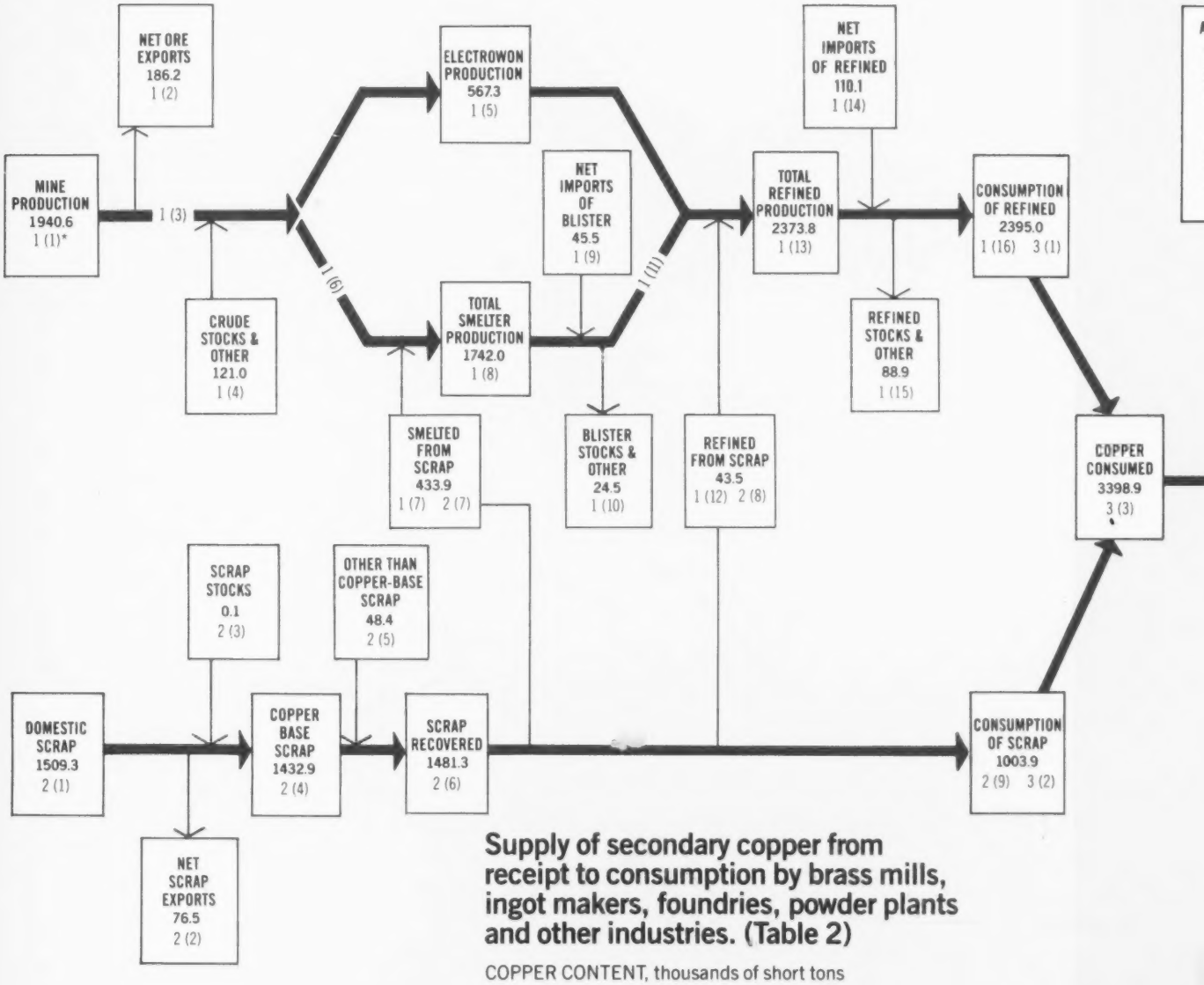
Contents

	Page
Preface	1
Copper supply and consumption—A schematic flow chart	4
Table 1, Supply of primary copper	6
Item 1, Mine production—U.S.	7
Mine production—world	7
Item 2, Imports and exports of ore	8
Item 8, Smelter production	8
Item 9, Imports and exports of blister copper	8
Item 10, Blister stocks and other	9
Item 13, Production of refined copper	9
Item 14, Imports and exports of refined copper	9
Item 15, Refined stocks and other	10
Item 16, Consumption of refined copper	10
Table 2, Supply of secondary copper	11
Item 2, Imports and exports of scrap	12
Item 3, Scrap stocks	12
Item 6, Recovery from scrap	13
Item 9, Consumption of scrap	13
Table 3, Consumption of metals by mills, foundries and others	14
Item 3, Consumption of copper by mills, foundries and others	15
Item 8, Consumption of alloying metal by mills, foundries and others	16
Item 12, Net consumption of metals by mills, foundries and others	17
Table 4, Supply and consumption of mill, foundry and powder products	18
Item 16, Supply of brass mill products—U.S.	19
Supply of brass mill products—other countries	19
Item 20, Imports and exports of mill and powder products	20

Copper supply and consumption in the United States 1992

Supply of primary copper from mine to consumption by wire rod mills, brass mills, ingot makers, foundries, powder plants and other industries. (Table 1)

COPPER CONTENT, thousands of short tons


NET ORE EXPORTS 186.2 1 (2)
ELECTROWON PRODUCTION 567.3 1 (5)
NET IMPORTS OF REFINED 110.1 1 (14)
ALLOYING
ZINC 337.1 3 (4)
LEAD 28.1 3 (5)
MINE PRODUCTION 1940.6 1 (1)*
1 (3)
NET IMPORTS OF BLISTER 45.5 1 (9)
TOTAL REFINED PRODUCTION 2373.8 1 (13)
CONSUMPTION OF REFINED 2395.0 1 (16) 3 (1)
1 (6)
1 (11)
CRUDE STOCKS & OTHER 121.0 1 (4)
TOTAL SMELTER PRODUCTION 1742.0 1 (8)
REFINED STOCKS & OTHER 88.9 1 (15)
SMELTED FROM SCRAP 433.9 1 (7) 2 (7)
BLISTER STOCKS & OTHER 24.5 1 (10)
REFINED FROM SCRAP 43.5 1 (12) 2 (8)
COPPER CONSUMED 3398.9 3 (3)
SCRAP STOCKS 0.1 2 (3)
OTHER THAN COPPER-BASE SCRAP 48.4 2 (5)
DOMESTIC SCRAP 1509.3 2 (1)
COPPER BASE SCRAP 1432.9 2 (4)
SCRAP RECOVERED 1481.3 2 (6)
CONSUMPTION OF SCRAP 1003.9 2 (9) 3 (2)
NET SCRAP EXPORTS 76.5 2 (2)

Supply of secondary copper from receipt to consumption by brass mills, ingot makers, foundries, powder plants and other industries. (Table 2)

COPPER CONTENT, thousands of short tons

*1 (1) Refers to table and item in report where data for 1972 through 1992 appear.

Consumption of metals by wire rod mills, brass mills, ingot makers, foundries, powder plants and other industries. (Table 3)

METAL CONTENT, thousands of short tons

Supply of wire mill, brass mill, foundry and powder products and their consumption in the end-use markets. (Table 4)

METAL CONTENT, millions of pounds

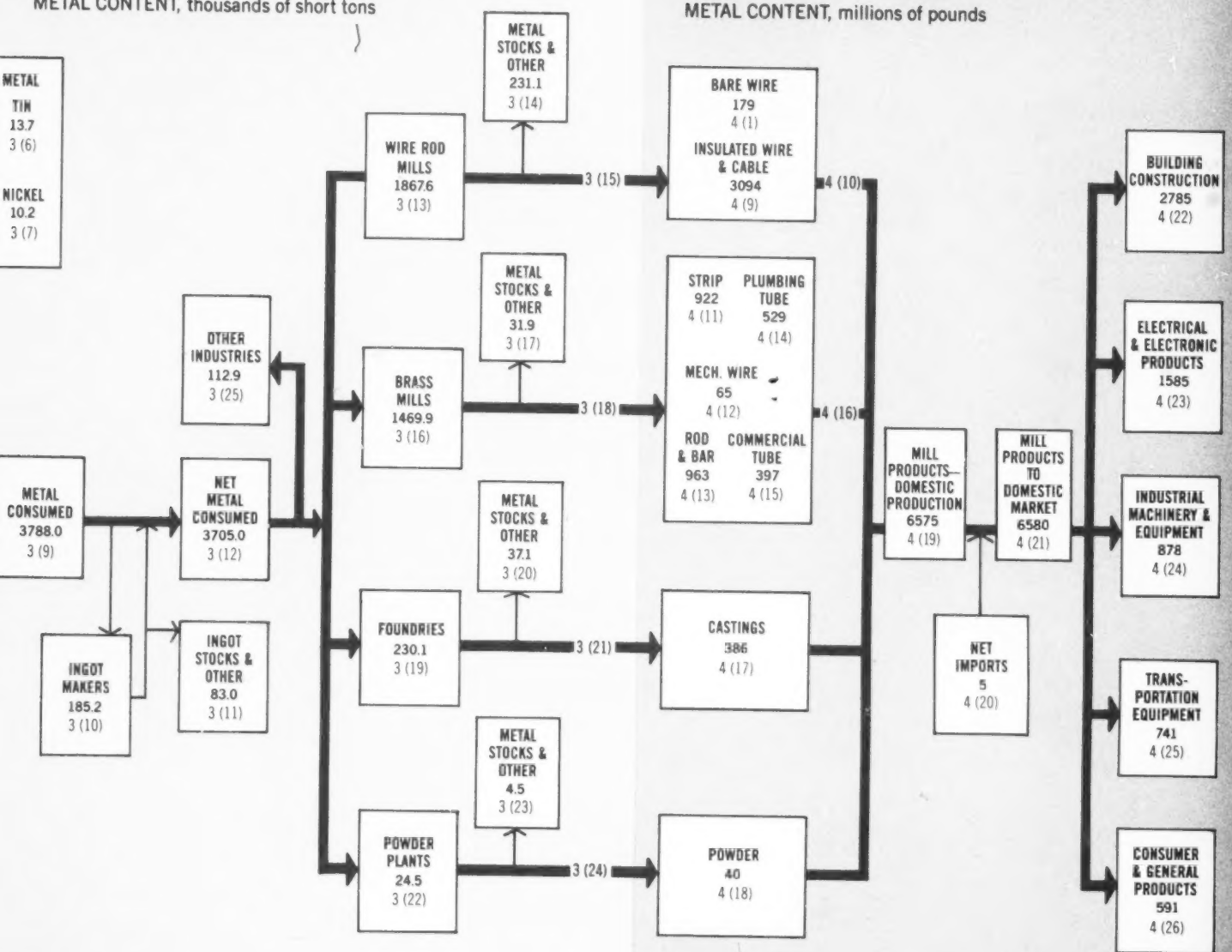


Table 1

Supply of primary copper from mine to consumption by wire rod mills, brass mills, ingot makers, foundries, powder plants and other industries

COPPER CONTENT, thousands of short tons

		1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992p
(1)	Mine Production (page 7)	1,664.8	1,717.9	1,597.0	1,413.4	1,605.6	1,504.0	1,496.5	1,594.6	1,301.9	1,695.5	1,264.3	1,144.3	1,215.4	1,217.9	1,261.3	1,370.8	1,561.9	1,651.1	1750.2r	1,797.9r	1,940.6
(2)	Net Ore Imports (page 8) [a]	35.4	19.4	36.7	65.7	74.8	42.2	13.9	–23.9	–101.2	–130.2	–107.1	55.7	–50.2	–120.5	–186.2	–124.7	–230.3	–252.0	–127.8	–198.4	–186.2
(3)	Total Crude Primary	1,700.2	1,737.3	1,633.7	1,479.1	1,680.4	1,546.2	1,510.4	1,570.7	1,200.7	1,565.3	1,157.2	1,200.0	1,165.2	1,097.4	1,075.1	1,246.1	1,331.6	1,399.1	1,622.4r	1,599.5r	1,754.4
(4)	Crude Stocks and Other	21.6	47.6	–29.4	8.1	–42.0	26.9	14.5	8.8	38.7	61.5	62.1	–64.9	63.1	39.3	64.1	3.3	69.4	179.8	86.3r	124.7r	121.0
(5)	Electrowon Production	31.4	40.9	34.4	40.1	103.7	137.9	104.7	107.2	127.9	175.3	143.8	112.4	110.4	99.7	138.2	177.8	251.3	343.8	433.7	486.4r	567.3
(6)	Smelter Production From Primary	1,690.4	1,744.0	1,569.9	1,447.1	1,534.7	1,435.2	1,420.2	1,472.3	1,111.5	1,451.5	1,075.5	1,022.7	1,117.9	1,037.0	1,001.0	1,071.6	1,149.7	1,235.1	1,277.0	1,237.8r	1,308.1
(7)	Smelter Production From Scrap	69.0	77.8	79.5	49.4	51.0	49.4	59.8	66.4	49.5	67.1	49.7	65.3	186.6	275.7	317.3	304.9	365.5	395.8	336.0	401.6	433.9
(8)	Total Smelter Production (page 8)	1,759.4	1,821.8	1,649.4	1,496.5	1,585.7	1,484.6	1,480.0	1,538.7	1,161.0	1,518.6	1,125.2	1,088.0	1,304.5	1,312.7	1,318.3	1,376.5	1,515.2	1,630.9	1,613.0	1,639.4r	1,742.0
(9)	Net Imports of Blister (page 8)	148.9	148.6	205.1	87.4	41.1	28.3	70.0	66.9	47.6	71.1	111.8	79.4	57.1	11.6	33.4	34.4	72.5	79.0	41.7	43.1	45.5
(10)	Blister Stocks and Other (page 9)	2.5	–63.0	–154.7	–131.2	–140.2	–105.2	2.4	24.0	47.7	4.1	21.2	88.5	8.8	17.1	11.3	–41.6	78.4	–30.0	–14.4	28.5r	–24.5
(11)	Refined Production from Blister	1,910.8	1,905.4	1,699.8	1,452.7	1,486.6	1,407.7	1,552.4	1,629.6	1,256.3	1,593.8	1,258.2	1,255.9	1,370.4	1,341.4	1,363.0	1,369.3	1,664.1	1,679.9	1,640.3	1,654.0r	1,763.0
(12)	Refined Production from Scrap	316.3	366.3	404.4	282.1	300.2	303.0	362.3	441.2	474.3	465.1	465.7	377.5	151.3	134.1	130.1	152.3	126.6r	133.4	149.8	58.9	43.5
(13)	Total Refined Production (page 9)	2,258.5	2,312.6	2,138.6	1,774.9	1,890.5	1,848.6	2,019.4	2,178.0	1,858.5	2,234.2	1,867.7	1,745.8	1,632.1	1,575.2	1,631.3	1,699.4	2,042.0	2,157.1	2,223.8	2,199.3r	2,373.8
(14)	Net Imports of Refined (page 9) [a]	9.7	8.8	177.2	–26.4	266.1	327.8	342.7	147.1	481.1	325.2	274.2	435.2	450.4	350.3	524.9	536.7	300.3	174.5	53.9	19.2	110.1
(15)	Refined Stocks and Other (page 10)	–30.6	126.9	–112.3	–206.2	–159.1	16.8	59.6	60.9	–280.8	–322.3	–307.5	–184.2	257.4	232.8	158.6	108.2	89.3	99.9	85.9r	35.5r	–88.9
(16)	Consumption of Refined (page 10)	2,237.6	2,448.3	2,203.5	1,542.3	1,997.5	2,193.2	2,421.7	2,386.0	2,058.8	2,237.1	1,834.4	1,996.8	2,339.9	2,158.3	2,314.8	2,344.3	2,431.6	2,431.5	2,363.6r	2,254.0	2,395.0

Sources: U.S. Department of the Interior, Bureau of Mines;
U.S. Department of Commerce, Bureau of the Census; ABMS.

p - preliminary r - revised

(a) - Negative (–) signs denote net exports.

Table 1, Item 1.

Mine production of recoverable copper in the United States

COPPER CONTENT, thousands of short tons

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992p
Arizona	908.6	927.3	858.8	813.2	1,024.4	923.8	982.6	1,046.1	848.9	1,147.3	848.3	747.6	822.8	877.0	866.5	827.9	928.9	990.4	1,078.9	1,128.8r	1,265.7
Michigan	67.3	72.2	67.0	73.7	43.7	42.4	38.4	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)
Missouri	11.5	10.3	12.7	14.3	11.1	11.7	11.9	14.4	15.0	9.3	8.8	8.5	6.4	14.8	(b)	(b)	(b)	(b)	(b)	(b)	(b)
Montana	123.1	132.5	131.1	88.0	91.1	86.2	74.2	77.0	41.6	68.9	71.6	36.8	24.1	16.6	(b)	(b)	(b)	(b)	(b)	(b)	(b)
Nevada	101.1	93.7	84.1	81.2	58.2	67.1	22.5	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)
New Mexico	168.0	204.7	196.6	146.3	172.4	164.7	140.9	181.1	164.7	169.9	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)
Tennessee	11.3	8.5	6.3	10.0	11.1	6.2	12.4	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)
Utah	259.5	256.6	230.6	177.2	185.5	194.1	205.4	212.8	173.9	232.9	208.4	187.1	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)
Other States [a]	14.4	12.1	9.8	9.5	8.1	7.8	8.2	63.2	57.8	67.2	127.2	164.3	362.1	309.5	394.8	542.9	633.0	660.7	671.3r	669.1	674.9
TOTAL	**1,664.8**	**1,717.9**	**1,597.0**	**1,413.4**	**1,605.6**	**1,504.0**	**1,496.5**	**1,594.6**	**1,301.9**	**1,695.5**	**1,264.3**	**1,144.3**	**1,215.4**	**1,217.9**	**1,261.3**	**1,370.8**	**1,561.9**	**1,651.1**	**1,750.2r**	**1,797.9r**	**1,940.6**

Sources: U.S. Department of the Interior, Bureau of Mines; ABMS. p - preliminary r - revised

(a) - Includes California, Colorado, Idaho, Maine, Oregon, Pennsylvania & Washington.

(b) - Included in Other States.

Mine production of recoverable copper in the World

COPPER CONTENT, thousands of short tons

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992p
Australia	204.8	242.8	277.0	241.4	240.9	244.3	244.8	261.9	268.4	255.0	270.4	268.3	259.8	286.4	273.8	256.5	262.7	325.2	360.5	352.7r	377.0
Brazil	5.0	3.7	3.4	2.1	0.1	—	0.1	—	0.4	15.3	26.9	35.4	38.8	45.2	44.3	44.4	49.4	48.9	40.2	40.8	41.0
Bulgaria	52.9	52.9	56.9	60.6	62.8	62.8	63.9	66.1	68.3	68.3	71.7	75.0	80.5	86.0	66.1	59.5	55.1	42.8	36.3	52.0r	52.0
Canada	793.3	908.2	905.4	808.9	805.7	837.1	726.9	701.5	789.7	762.0	675.2	719.8	795.6	814.2	770.0	884.3	855.9	797.1	875.0r	894.1r	842.4
Chile	790.1	810.6	994.4	913.0	1,108.0	1,162.1	1,140.0	1,171.4	1,177.2	1,191.7	1,369.3	1,386.2	1,422.8	1,495.2	1,543.0	1,563.2	1,599.5	1,773.9	1,750.9	1,999.9r	2,130.5
China (including Mongolia)	126.8	132.3	143.3	154.3	165.3	170.9	180.8	200.3	230.4	266.5	297.6	297.6	308.6	330.7	374.8	518.1	541.9	554.9r	533.4r	518.1r	540.1
Confed. of Indep. States (formerly USSR)	988.0	1,017.0	1,017.0	1,047.2	1,080.3	1,080.3	1,069.2	1,069.2	1,080.3	1,102.3	1,113.3	1,124.4	1,124.4	1,135.4	1,135.4	1,113.3	1,091.3	1,047.2	992.1	925.9r	925.9
India	16.1	24.7	22.9	26.7	28.0	33.3	29.3	30.5	30.4	27.8	26.5	48.3	51.8	52.9	54.2	59.6	56.8	58.8	56.9	55.6r	66.5
Indonesia	5.5	41.8	72.1	70.0	76.2	62.9	63.9	66.4	65.0	69.0	82.8	86.6	94.4	97.8	105.6	116.1	138.8	163.8	186.8	233.4r	321.9
Iran	1.3	2.2	2.2	4.4	6.6	6.6	6.6	3.3	1.1	2.2	47.4	63.5	47.7	44.1	55.1	44.1	56.2	75.0	66.5	91.9r	115.7
Japan	123.6	100.6	90.5	93.7	89.9	89.7	79.4	65.1	58.0	56.8	55.9	50.7	47.7	47.6	38.5	26.2	18.4	18.2	14.3	13.7	13.4
Mexico	86.8	88.7	91.2	86.2	98.1	98.9	96.1	118.1	193.3	254.1	263.6	227.2	208.4	197.2	200.6	254.2	308.0	274.8	321.1	294.3r	303.2
Namibia (South West Africa)	23.7	31.7	36.6	38.5	48.0	55.2	41.6	46.2	43.2	48.8	53.8	57.4	55.1	52.5	55.0	40.5	43.4	34.0	35.8	38.6r	38.1
Papua New Guinea	136.7	201.6	202.9	190.1	194.6	201.0	218.9	188.3	161.8	182.3	187.4	201.9	181.2	192.9	196.9	240.0	241.0	224.9r	187.6	225.4	213.2
Peru	241.5	223.4	233.2	194.0	207.2	370.4	419.9	446.9	404.2	361.1	392.8	355.2	401.4	441.8	438.1	448.0	328.8	401.5	350.1	413.7r	405.8
Philippines	235.6	243.8	248.6	248.9	261.9	300.7	290.6	328.8	335.7	333.2	322.0	299.2	257.3	244.9	245.4	238.4	240.4	212.9	201.0	163.2r	136.2
Poland	148.8	167.6	203.9	253.5	289.9	310.9	343.9	374.8	378.1	324.7	414.5	443.5	475.1	476.2	479.5	482.8	486.1	424.4	363.0	353.1r	426.6
Portugal	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.3	0.2	1.2	5.7	114.3	176.0	173.4r	177.7
Scandinavia	100.1	124.5	110.7	118.6	129.8	133.0	135.9	127.4	119.7	129.0	133.6	149.6	155.9	158.0	157.4	139.5	121.8	110.8	116.6	120.8r	122.9
South Africa	178.5	193.8	197.4	197.2	217.0	238.2	230.7	224.0	233.6	232.1	228.3	233.5	233.7	224.0	212.6	217.3	211.8	216.7	216.9	212.7r	218.0
United States	1,664.8	1,717.9	1,597.0	1,413.4	1,605.6	1,504.0	1,496.5	1,594.6	1,301.9	1,695.5	1,264.3	1,144.3	1,215.4	1,217.9	1,261.3	1,370.8	1,561.9	1,651.1	1,750.2r	1,797.9r	1,940.6
Yugoslavia	113.6	123.2	123.6	126.7	132.4	128.1	135.9	122.8	128.7	122.4	131.5	142.7	128.1	133.5	129.7	122.4	97.0	130.8	131.2	125.0r	98.1
Zaire	480.3	538.5	550.8	545.4	490.1	530.9	467.2	440.7	506.7	556.4	554.2	553.6	551.9	553.5	554.0	551.2	512.7	485.7	391.9	321.3r	192.5
Zambia	790.5	778.9	769.4	746.2	781.4	723.1	706.8	648.5	656.8	647.5	624.9	596.3	622.6	572.8	599.1	580.9	524.8	562.4	546.7	454.6r	476.9
Other (18 countries in 1991)	329.8	360.5	352.8	342.3	322.6	314.7	269.5	263.1	257.0	288.5	299.9	307.8	329.3	348.7	301.4	266.7	260.6r	284.1r	236.8r	213.6r	193.7
TOTAL WORLD	**7,638.1**	**8,130.9**	**8,303.2**	**7,923.3**	**8,442.4**	**8,659.1**	**8,460.4**	**8,559.9**	**8,489.9**	**8,992.5**	**8,907.8**	**8,890.0**	**9,087.5**	**9,249.7**	**9,292.0**	**9,639.2**	**9,670.0r**	**10,032.2r**	**9,937.8r**	**10,085.7r**	**10,369.9**

Sources: United States - U.S. Department of the Interior, Bureau of Mines.
Other Countries - ABMS; Metallgesellschaft; WBMS; CDA.
p - preliminary r - revised

Table 1, Item 2.

Imports and exports of copper ore in the United States

COPPER CONTENT, thousands of short tons

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992p
Imports (Ore, Concentrate, Matte)	55.0	42.9	56.0	74.0	89.6	58.0	33.2	25.2	16.5	36.0	106.1	102.8	17.1	7.7	6.0	12.8	9.1	52.3	159.8	68.8	107.3
Exports (Ore, Concentrate, Matte)	−19.6	−23.5	−19.3	−8.3	−14.8	−15.8	−19.3	−49.1	−117.7	−166.2	−215.2	−47.1	−67.3	−128.2	−192.2	−137.5	−239.4	−304.3	−287.6	−267.2	−293.5
Net Imports (Ore, Concentrate, Matte)	**35.4**	**19.4**	**36.7**	**65.7**	**74.8**	**42.2**	**13.9**	**−23.9**	**−101.2**	**−130.2**	**−107.1**	**55.7**	**−50.2**	**−120.5**	**−186.2**	**−124.7**	**−230.3**	**−252.0**	**−127.8**	**−198.4**	**−186.2**

Source: U.S. Department of Commerce, Bureau of the Census.
p - preliminary

Table 1, Item 8.

Smelter production of copper in the United States

COPPER CONTENT, thousands of short tons

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992p
Smelter Production - Domestic Ore (Table 1, Item 6)	1,649.1	1,705.1	1,532.1	1,374.3	1,461.3	1,394.4	1,389.9	1,447.6	1,096.2	1,427.5	1,036.8	979.0	1,091.2	1,035.4	1,001.0	1,071.6	1,149.7	1,235.1	1,277.0	1,237.8r	1,308.1
Smelter Production - Foreign Ore (Table 1, Item 6)	41.3	38.9	37.8	72.8	73.4	40.0	20.3	24.7	15.3	24.0	38.7	43.7	26.7	1.6	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Smelter Production - Scrap (Table 1, Item 7)	69.0	77.6	79.5	49.4	51.0	49.4	59.8	66.4	49.5	67.1	49.7	85.3	186.6	275.7	317.3	304.9	365.5	395.8	336.0	401.6	433.9
TOTAL SMELTER PRODUCTION	**1,759.4**	**1,821.8**	**1,649.4**	**1,496.5**	**1,585.7**	**1,484.6**	**1,480.0**	**1,538.7**	**1,161.0**	**1,518.6**	**1,125.2**	**1,088.0**	**1,304.5**	**1,312.7**	**1,318.3**	**1,376.5**	**1,515.2**	**1,630.9**	**1,613.0**	**1,639.4r**	**1,742.0**

Source: U.S. Department of the Interior, Bureau of Mines.
p - preliminary r - revised
(a) - Included under domestic ore.

Table 1, Item 9.

Imports and exports of blister copper in the United States

COPPER CONTENT, thousands of short tons

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992p
Imports of Blister Copper	157.4	154.1	207.8	86.9	43.6	44.7	81.4	75.1	51.8	81.3	114.0	87.6	86.3	31.4	51.0	48.0	108.5	85.1	48.8	66.5	64.2
Exports of Blister Copper	−8.5	−7.5	−2.7	−1.5	−2.7	−16.4	−11.4	−8.2	−4.2	−10.2	−2.2	−6.2	−9.2	−19.8	−17.6	−13.6	−36.0	−6.1	−7.1	−23.4	−18.7
Net Imports of Blister Copper	**148.9**	**146.6**	**205.1**	**87.4**	**41.1**	**28.3**	**70.0**	**66.9**	**47.6**	**71.1**	**111.8**	**79.4**	**57.1**	**11.6**	**33.4**	**34.4**	**72.5**	**79.0**	**41.7**	**43.1**	**45.5**

Source: U.S. Department of Commerce, Bureau of the Census.
p - preliminary

Table 1, Item 10.

Blister stocks and other

COPPER CONTENT, thousands of short tons

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992p
End-of-Year Blister Copper Stocks	282.0	265.0	324.0	312.0	321.0	346.0	290.0	303.1	299.8	305.3	256.8	191.8	270.1	160.9	149.9	165.3	133.4	145.5	131.2	148.9r	180.6
Net Change (a)	–21.0	–17.0	59.0	–12.0	9.0	25.0	–56.0	13.1	–3.3	5.5	–48.5	–65.0	78.3	–109.2	–11.0	15.4	–31.9	12.1	–14.3	17.7r	31.7
Apparent Change (b)	–2.5	63.0	154.7	131.2	140.2	105.2	–2.4	–24.0	–47.7	–4.1	–21.2	–88.5	–8.8	–17.1	–11.3	41.6	–76.4r	30.0	14.4	28.5r	24.5

Sources: U.S. Department of the Interior, Bureau of Mines; ABMS.
p - preliminary r - revised
(a) - Net Change — the year-to-year increase (+) or decrease (–) of blister copper stocks as reported.
(b) - Apparent Change — the difference between Line 11 and the sum of Lines 6 & 9 in Table 1, required to rationalize the CDA flow sheet. Factors other than changes in stocks are included in the apparent change. The sign of the data (+ or –) is opposite that shown in Table 1.

Table 1, Item 13.

Production of refined copper in the United States

COPPER CONTENT, thousands of short tons

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992p
Refined Production - Primary Sources (Table 1, Items 1, 2, 4, 9 & 10)	1,873.2	1,868.5	1,654.7	1,443.4	1,539.3	1,496.2	1,597.3	1,670.4	1,334.7	1,702.0	1,352.3	1,303.0	1,294.2	1,165.4	1,183.9	1,242.2	1,549.9	1,627.9	1,738.0	1,738.8r	1,898.4
Refined Production - Scrap at Smelters (Table 1, Item 7)	69.0	77.8	79.5	49.4	51.0	49.4	59.8	66.4	49.5	67.1	49.7	65.3	186.6	275.7	317.3	304.9	365.5	395.8	336.0	401.6	433.9
Refined Production - Scrap at Refiners (Table 1, Item 12)	316.3	366.3	404.4	282.1	300.2	303.0	362.3	441.2	474.3	485.1	485.7	377.5	151.3	134.1	130.1	152.3	126.6	133.4	149.8	58.9	43.5
TOTAL REFINED PRODUCTION	**2,258.5**	**2,312.5**	**2,138.6**	**1,774.9**	**1,890.5**	**1,848.6**	**2,019.4**	**2,178.0**	**1,858.5**	**2,234.2**	**1,887.7**	**1,745.8**	**1,632.1**	**1,575.2**	**1,631.3**	**1,699.4**	**2,042.0**	**2,157.1**	**2,223.8**	**2,199.3r**	**2,373.8**

Sources: U.S. Department of the Interior, Bureau of Mines; U.S. Department of Commerce, Bureau of the Census; ABMS.
p - preliminary r - revised

Table 1, Item 14.

Imports and exports of refined copper in the United States

COPPER CONTENT, thousands of short tons

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992p
Imports of Refined Copper	192.4	199.9	303.9	146.0	380.7	390.8	455.8	237.2	505.0	391.2	313.9	532.4	555.9	420.1	542.0	557.0	367.1	334.9	288.4	318.1	318.7
Exports of Refined Copper	–182.7	–191.1	–126.7	–172.4	–114.8	–63.0	–113.1	–90.1	–23.9	–68.0	–39.7	–97.2	–105.5	–69.8	–17.1	–20.3	–66.8	–160.4	–234.5	–298.9	–208.6
Net Imports of Refined Copper	**9.7**	**8.8**	**177.2**	**–26.4**	**266.1**	**327.8**	**342.7**	**147.1**	**481.1**	**325.2**	**274.2**	**435.2**	**450.4**	**350.3**	**524.9**	**536.7**	**300.3**	**174.5**	**53.9**	**19.2**	**110.1**

Source: U.S. Department of Commerce, Bureau of the Census.
p - preliminary

Table 1, Item 15.

Refined stocks and other

COPPER CONTENT, thousands of short tons

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992p
End-of-year Refined Copper Stocks at:																					
Refineries	99.6	43.2	151.6	260.7	272.8	286.7	188.3	78.4	73.4	151.0	210.1	66.1	193.4	150.4	145.1	63.1	42.9	56.3	52.1	41.6	29.5
Wire Rod Mills	75.0	61.0	131.0	140.0	133.0	116.3	69.7	48.7	54.6	120.3	137.8	127.9	147.7	110.2	72.8	30.9	32.0	35.3	26.5	32.6	40.7
Brass Mills	35.0	43.0	42.0	33.0	39.0	34.2	30.7	27.0	24.5	29.2	28.0	28.7	29.8	22.0	15.4	16.5	18.7	13.2	11.0	11.8	14.0
Other Processors	5.4	5.6	6.9	6.1	7.0	7.0	7.5	10.4	11.3	9.4	8.4	9.2	8.1	8.1	8.8	9.9	10.2	10.7	9.4	7.3r	9.3
Government	226.6	217.8	35.3	26.2	42.1	22.6	22.5	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3
Commodity Exchange	57.8	5.9	43.3	100.0	201.0	184.4	179.6	107.9	179.6	187.6	274.5	409.2	276.3	120.3	93.3	18.3	13.4	16.3	20.2	33.7	105.9
End-of-Year Total	**499.4**	**376.5**	**410.1**	**566.0**	**694.9**	**651.2**	**498.3**	**294.7**	**365.7**	**519.8**	**681.1**	**663.4**	**677.6**	**433.3**	**357.7**	**161.0**	**139.5**	**154.1**	**141.5**	**149.3r**	**221.7**
Net Change [a]	–31.2	–122.9	33.6	155.9	128.9	–43.7	–152.9	–203.6	71.0	154.1	161.3	–17.7	14.2	–244.3	–75.6	–196.7	–21.5	14.6	–12.6	7.8r	72.4
Apparent Change [b]	30.6	–126.9	112.3	206.2	159.1	–16.8	–59.6	–60.9	280.8	322.3	307.5	184.2	–257.4	–232.8	–158.6	–108.2	–89.3	–99.9	–85.9r	–35.5r	88.9

Sources: U.S. Department of the Interior, Bureau of Mines; ABMS.

p - preliminary r - revised

(a) - Net Change — the year-to-year increase (+) or decrease (–) of refined copper stocks as reported.

(b) - Apparent Change — the difference between Line 16 and the sum of Lines 13 & 14 in Table 1, required to rationalize the CDA flow sheet. Factors other than changes in stocks are included in the apparent change. The sign of the data (+ or –) is opposite that shown in Table 1.

Table 1, Item 16.

Consumption of refined copper in the United States

COPPER CONTENT, thousands of short tons

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992p
Consumption of Refined Copper by:																					
Wire Rod Mills	1,526.3	1,672.3	1,474.3	1,061.3	1,364.0	1,511.2	1,672.7	1,653.0	1,442.8	1,597.9	1,359.0	1,399.8	1,658.6	1,545.1	1,644.6	1,757.0	1,837.8	1,872.1	1,822.6r	1,754.6	1,846.4
Brass Mills	667.2	714.4	670.2	439.0	584.8	628.6	682.6	672.6	564.0	591.1	433.4	551.4	635.1	566.6	622.7	538.6	543.7	508.2	490.8	456.8r	503.2
Ingot Makers	6.0	6.1	9.2	4.5	7.5	6.6	8.2	6.9	5.5	6.0	4.8	4.9	7.6	5.9	5.8	5.8	6.2	6.3	6.2	5.2r	5.6
Foundries	17.9	30.6	28.7	21.7	21.0	22.5	22.1	19.9	18.2	17.7	15.1	15.6	17.7	15.9	16.2	16.3	16.7	17.2	16.8	14.3r	15.2
Powder Plants	9.5	12.7	12.0	6.8	11.8	11.3	11.5	11.6	8.3	8.3	7.5	8.5	8.7	8.1	7.9	8.5	8.7	9.0	8.8	7.5r	7.9
Other Industries [a]	10.7	12.2	9.1	9.0	8.4	13.0	24.6	22.0	20.0	18.1	14.6	16.6	12.2	16.7	17.6	18.1	18.5	18.7	18.4	15.6r	16.7
TOTAL REFINED CONSUMPTION	**2,237.6**	**2,448.3**	**2,203.5**	**1,542.3**	**1,997.5**	**2,193.2**	**2,421.7**	**2,386.0**	**2,058.8**	**2,237.1**	**1,834.4**	**1,996.8**	**2,339.9**	**2,158.3**	**2,314.8**	**2,344.3**	**2,431.6**	**2,431.9r**	**2,363.6r**	**2,254.0r**	**2,395.0**

Sources: U.S. Department of the Interior, Bureau of Mines; U.S. Department of Commerce, Bureau of the Census; ABMS.

p - preliminary r - revised

(a) - Chemical, steel, aluminum and other industries.

Table 2

Supply of secondary copper from receipt to consumption by brass mills, ingot makers, foundries, powder plants and other industries

	COPPER CONTENT, thousands of short tons																				
	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992p
(1) Receipts of Domestic Scrap	1,440.8	1,560.9	1,504.3	1,113.0	1,271.1	1,318.4	1,426.9	1,661.6	1,541.8	1,553.4	1,317.1	1,302.8	1,352.2	1,468.3	1,488.9	1,546.8	1,708.9	1,736.4r	1,649.5	1,527.1r	1,509.3
(2) Net Scrap Imports (page 12) [a]	–39.2	–81.4	–70.5	–84.3	–54.1	–58.5	–95.9	–100.7	–120.8	–80.0	–81.8	–45.9	–98.8	–193.6	–189.0	–169.1	–206.5	–240.6	–181.9	–174.2	–76.5
(3) Scrap Stocks (page 12)	7.0	–2.0	–3.0	5.0	–19.0	–10.9	22.7	–10.6	12.1	–10.0	9.2	7.3	9.2	–23.5	22.8	0.2	–12.6	13.1	11.3	0.2	0.1
(4) Recovery From Copper-Base Scrap (page 13)	1,408.6	1,477.5	1,430.8	1,033.7	1,198.0	1,249.0	1,353.7	1,550.3	1,433.1	1,463.4	1,244.5	1,264.2	1,262.6	1,251.2	1,322.7	1,377.9	1,489.8	1,508.9r	1,478.9	1,353.1r	1,432.9
(5) Recovery From Other Scrap (page 13)	19.7	21.1	21.1	28.1	35.7	37.9	39.8	42.5	38.9	42.9	40.6	42.7	42.5	42.8	44.6	46.5	50.4	51.0	49.9	45.7r	48.4
(6) Total Scrap Recovery (page 13)	1,428.3	1,498.6	1,451.9	1,061.8	1,233.7	1,286.9	1,393.5	1,592.8	1,472.0	1,506.3	1,285.1	1,306.9	1,305.1	1,294.0	1,367.3	1,424.4	1,540.2	1,559.9	1,528.8	1,398.8r	1,481.3
(7) Smelter Production From Scrap	–69.0	–77.8	–79.5	–49.4	–51.0	–49.4	–59.8	–66.4	–49.5	–67.1	–49.7	–65.3	–186.6	–275.7	–317.3	–304.9	–365.5	–395.8	–336.0	–401.6	–433.9
(8) Refined Production From Scrap	–316.3	–366.3	–404.4	–282.1	–300.2	–303.0	–362.3	–441.2	–474.3	–465.1	–465.7	–377.5	–151.3	–134.1	–130.1	–152.3	–126.6	–133.4	–149.8	–58.9	–43.5
(9) Consumption of Scrap (page 13)	1,043.0	1,054.5	968.0	730.3	882.5	934.5	971.4	1,085.2	948.2	974.1	769.7	864.1	967.2	884.2	919.9	967.2	1,048.1	1,030.7	1,043.0	938.3r	1,003.9

Sources: U.S. Department of the Interior, Bureau of Mines;
U.S. Department of Commerce, Bureau of the Census; ABMS

p - preliminary r - revised

(a) - Negative (–) signs denote net exports.

Table 2, Item 2.

Imports and exports of copper-base scrap in the United States

COPPER CONTENT, thousands of short tons

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992p
Imports of Copper-Base Scrap	18.8	27.1	41.7	20.2	29.4	28.6	28.8	32.0	32.5	38.8	38.8	60.1	59.6	50.9	61.6	73.0	80.8	96.0	115.7	106.7	147.5
Exports of Copper-Base Scrap	−58.0	−108.5	−112.2	−104.5	−83.5	−87.1	−124.7	−132.7	−153.3	−118.8	−120.6	−106.0	−158.4	−244.5	−250.6	−242.1	−287.3	−336.6	−297.6	−280.9	−224.0
Net Imports of Copper-Base Scrap [a]	**−39.2**	**−81.4**	**−70.5**	**−84.3**	**−54.1**	**−58.5**	**−95.9**	**−100.7**	**−120.8**	**−80.0**	**−81.8**	**−45.9**	**−98.8**	**−193.6**	**−189.0**	**−169.1**	**−206.5**	**−240.6**	**−181.9**	**−174.2**	**−76.5**

Sources: U.S. Department of Commerce, Bureau of the Census; ABMS.
p - preliminary
(a) - The negative (−) sign for each year is used to be consistent with the convention used in Tables 1, 2 and 4 — namely that imports are **additions** to the domestic flow, and therefore (+), while exports are **subtractions** from the flow, and therefore (−).

Table 2, Item 3.

Copper-base scrap stocks

COPPER CONTENT, thousands of short tons

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992p
Scrap Copper-Base Stocks at:																					
Brass Mills	36.0	44.0	45.0	46.0	48.0	54.7	44.4	45.6	44.9	39.7	45.6	39.8	40.3	30.9	32.9	39.8	41.7	36.1	33.1	27.4	39.1
Secondary Smelters	22.0	23.0	24.0	27.0	28.0	33.2	26.0	30.1	30.5	41.7	23.7	18.0	23.5	68.9	46.8	39.8	48.4	43.0	35.7	41.1r	29.6
Primary Producers	24.0	19.0	18.0	12.0	25.0	27.7	22.1	27.5	16.6	19.1	23.7	28.2	14.3								
Foundries	13.0	11.0	13.0	11.0	13.0	11.3	10.8	10.7	9.9	11.1	9.8	9.5	8.5	9.9	7.8	7.7	9.4	7.7	7.0	7.0	6.8
Other Processors	4.0	4.0	4.0	3.0	4.0	2.0	2.9	2.9	2.8	3.1	2.7	2.7	2.4	2.8	2.2	2.2	2.6	2.2	1.9	2.0	1.9
End-of-Year Total	**99.0**	**101.0**	**104.0**	**99.0**	**118.0**	**128.9**	**106.2**	**116.8**	**104.7**	**114.7**	**105.5**	**98.2**	**89.0**	**112.5**	**89.7**	**89.5**	**102.1**	**89.0**	**77.7**	**77.5r**	**77.4**
Net Change [a]	−7.0	2.0	3.0	−5.0	19.0	10.9	−22.7	10.6	−12.1	10.0	−9.2	−7.3	−9.2	23.5	−22.6	−0.2	12.6	−13.1	−11.3	−0.2r	−0.1

Sources: U.S. Department of the Interior, Bureau of Mines; ABMS.
p - preliminary r - revised
(a) - Net Change — the year-to-year increase (+) or decrease (−) of stocks as reported. The sign of the data (+ or −) is opposite that shown in Table 2.

Table 2, Item 6.

Recovery of copper from scrap

	COPPER CONTENT, thousands of short tons																				
	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992p
Copper Recovered From Copper-Base Scrap																					
New Scrap	854.4	901.9	864.2	593.6	716.1	731.2	790.4	947.0	828.6	859.7	687.3	706.7	709.0	693.6	700.2	752.1	832.9	803.7	803.5	739.3r	769.9
Old Scrap	554.2	575.6	566.6	440.1	481.9	517.8	563.3	603.3	604.5	603.7	557.2	555.5	553.6	557.6	622.5	625.8	656.9	705.2	675.4	613.8r	663.0
Total (Table 2, Item 4)	1,408.6	1,477.5	1,430.8	1,033.7	1,198.0	1,249.0	1,353.7	1,550.3	1,433.1	1,463.4	1,244.5	1,264.2	1,262.6	1,251.2	1,322.7	1,377.9	1,489.8	1,508.9	1,478.9	1,353.1r	1,432.9
Copper Recovered From Scrap Other Than Copper-Base																					
New Scrap	13.0	14.3	14.0	17.4	20.7	21.9	22.9	24.5	22.5	25.6	22.6	22.6	22.5	22.6	22.1	23.9	26.6	25.5	25.5	23.5r	24.4
Old Scrap	6.7	6.8	7.1	10.7	15.0	16.0	16.9	18.0	16.4	17.3	18.0	20.1	20.0	20.2	22.5	22.6	23.8	25.5	24.4	22.2r	24.0
Total (Table 2, Item 5)	19.7	21.1	21.1	28.1	35.7	37.9	39.8	42.5	38.9	42.9	40.6	42.7	42.5	42.8	44.6	46.5	50.4	51.0	49.9	45.7r	48.4
Copper Recovered From All Scrap																					
New Scrap	867.4	916.2	878.2	611.0	736.8	753.1	813.3	971.5	851.1	885.3	709.9	731.3	731.5	716.2	722.3	776.0	859.5	829.2	829.0	762.8r	794.3
Old Scrap	560.9	582.4	573.7	450.8	496.9	533.8	580.2	621.3	620.9	621.0	575.2	575.6	573.6	577.8	645.0	648.4	680.7	730.7	699.8	636.0r	687.0
Total Copper Recovered (Table 2, Item 8)	1,428.3	1,498.6	1,451.9	1,061.8	1,233.7	1,286.9	1,393.5	1,592.8	1,472.0	1,506.3	1,285.1	1,306.9	1,305.1	1,294.0	1,367.3	1,424.4	1,540.2	1,559.9	1,528.8	1,398.8r	1,481.3

Sources: U.S. Department of the Interior, Bureau of Mines; ABMS.
p - preliminary r - revised

Table 2, Item 9.

Consumption of copper scrap in the United States

	COPPER CONTENT, thousands of short tons																				
	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992p
Consumption of Copper Scrap by:																					
Wire Rod Mills	16.3	17.3	15.9	11.4	14.6	15.0	15.3	17.1	15.0	15.8	12.6	15.2	16.4	14.9	15.9	16.6	24.4	31.2	27.0	19.8	21.2
Brass Mills	562.1	595.2	547.1	394.9	504.7	516.9	526.4	590.9	517.3	543.5	435.6	525.7	567.4	514.3	546.9	589.3	646.5	613.0	637.3	597.7r	641.0
Ingot Makers	250.5	236.7	215.0	164.0	173.0	195.0	205.5	238.2	214.0	213.0	173.2	176.4	219.5	202.4	200.6	201.6	213.2	218.4	214.0	181.7r	193.9
Foundries	121.7	122.7	115.4	90.9	95.7	101.2	105.2	113.0	87.0	84.7	72.1	74.3	84.2	78.7	79.9	80.3	82.7	84.7	83.0	69.9r	74.3
Powder Plants	16.0	17.3	17.7	11.6	16.8	18.3	18.5	18.1	12.8	12.9	10.1	13.2	13.1	12.2	11.9	12.8	13.1	13.5	13.2	11.2r	12.0
Other Industries [a]	76.4	65.3	56.9	57.5	77.7	88.1	100.5	107.9	102.1	104.2	66.1	59.3	66.6	61.7	64.7	66.6	68.2	69.9	68.5	58.0r	61.5
TOTAL COPPER CONSUMED	1,043.0	1,054.5	968.0	730.3	882.5	934.5	971.4	1,085.2	948.2	974.1	769.7	864.1	967.2	884.2	919.9	967.2	1,048.1	1,030.7	1,043.0	938.3r	1,003.9

Sources: U.S. Department of the Interior, Bureau of Mines; U.S. Department of Commerce, Bureau of the Census; ABMS.
p - preliminary r - revised
(a) - Chemical, steel, aluminum and other industries.

Table 3

Consumption of metals by wire rod mills, brass mills, ingot makers, foundries, powder plants and other industries

	METAL CONTENT, thousands of short tons																				
	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992p
(1) Consumption of Refined Copper (Table 1, Item 16)	2,237.6	2,448.3	2,203.5	1,542.3	1,997.5	2,193.2	2,421.7	2,386.0	2,058.8	2,237.1	1,834.4	1,996.8	2,339.9	2,158.3	2,314.8	2,344.3	2,431.6	2,431.5	2,363.6r	2,254.0r	2,395.0
(2) Consumption of Copper in Scrap (Table 2, Item 9)	1,043.0	1,054.5	968.0	730.3	882.5	934.5	971.4	1,085.2	948.2	974.1	769.7	864.1	967.2	884.2	919.9	967.2	1,048.1	1,030.7	1,043.0	938.3r	1,003.9
(3) Total Copper Consumed (page 15)	**3,280.6**	**3,502.8**	**3,171.5**	**2,272.6**	**2,880.0**	**3,127.7**	**3,393.1**	**3,471.2**	**3,007.0**	**3,211.2**	**2,604.1**	**2,860.9**	**3,307.1**	**3,042.5**	**3,234.7**	**3,311.5**	**3,479.7**	**3,462.2**	**3,406.6r**	**3,192.3r**	**3,398.9**
(4) Consumption of Zinc	387.0	381.0	347.2	234.7	323.1	328.8	347.8	358.9	298.1	313.7	246.6	302.1	353.3	286.7	293.6	323.6	340.9	321.5	312.6	305.2r	337.1
(5) Consumption of Lead	26.1	28.8	28.1	19.7	26.0	30.0	30.1	30.8	25.7	26.0	22.4	25.3	30.8	27.5	27.5	28.5	30.1	30.1	29.4	26.0r	28.1
(6) Consumption of Tin	22.6	16.3	16.2	11.7	14.4	16.7	16.4	16.4	14.2	14.5	11.7	12.4	15.2	13.9	13.8	13.9	14.8	14.9	14.7	12.7r	13.7
(7) Consumption of Nickel	11.2	17.2	12.0	12.0	9.7	8.1	7.4	11.2	10.6	14.3	5.8	8.9	10.3	8.5	8.8	9.8	10.3	9.6	9.3	9.2	10.2
(8) Total Alloying Metal Consumed (page 16)	**446.9**	**443.3**	**403.5**	**278.1**	**373.2**	**383.6**	**401.7**	**417.3**	**348.6**	**368.5**	**286.5**	**348.7**	**409.6**	**336.6**	**343.7**	**375.8**	**396.1**	**376.1**	**366.0**	**353.1r**	**389.1**
(9) Total Metal Consumed	**3,727.5**	**3,946.1**	**3,575.0**	**2,550.7**	**3,253.2**	**3,511.3**	**3,794.8**	**3,888.5**	**3,355.6**	**3,579.7**	**2,890.6**	**3,209.6**	**3,716.7**	**3,379.1**	**3,578.4**	**3,687.3**	**3,875.8**	**3,838.3**	**3,772.6r**	**3,545.4r**	**3,788.0**
(10) Ingot Consumed (page 17) [a]	301.3	300.0	284.7	194.3	236.5	258.2	256.6	266.2	235.6	239.6	191.8	197.5	205.0	190.2	196.1	198.3	204.6	208.1	204.0	173.7r	185.2
(11) Ingot Stocks & Other (page 17) [a,b]	-32.1	-10.9	-7.2	-24.7	-7.2	-14.2	-21.4	-44.0	-41.2	-43.0	-41.1	-46.1	-100.2	-89.8	-81.3	-80.5	-90.3	-93.9	-92.0	-77.6r	-83.0
(12) Net Metal Consumed (page 17)	**3,695.4**	**3,935.2**	**3,567.8**	**2,526.0**	**3,246.0**	**3,497.1**	**3,773.4**	**3,844.5**	**3,314.4**	**3,536.7**	**2,849.5**	**3,163.5**	**3,616.5**	**3,289.3**	**3,497.1**	**3,606.8**	**3,785.5**	**3,744.4**	**3,680.6r**	**3,467.8r**	**3,705.0**
(13) Wire Rod Mills - Net Metal Consumed (page 17)	1,542.6	1,689.6	1,490.2	1,072.7	1,378.6	1,526.2	1,688.0	1,670.1	1,457.8	1,613.7	1,371.6	1,415.0	1,675.0	1,560.0	1,660.5	1,773.6	1,862.2	1,903.3	1,849.0r	1,774.4	1,867.6
(14) Wire Rod & Wire Mills - Metal Stocks & Other	-186.1	-223.6	-164.7	-34.2	-170.6	-97.7	-180.5	-123.1	-69.3	-176.2	-56.6	-88.5	-170.0	-96.0	-160.5	-130.1	-219.2	-272.3	-228.6r	-208.4r	-231.1
(15) Wire Mills - Metal Contained in Products Supplied (Table 4, Item 10)	1,356.5	1,466.0	1,325.5	1,038.5	1,208.0	1,428.5	1,507.5	1,547.0	1,388.5	1,437.5	1,315.0	1,326.5	1,505.0	1,464.0	1,500.0	1,643.5	1,643.0	1,631.0	1,621.0	1,566.0r	1,636.5
(16) Brass Mills - Net Metal Consumed (page 17)	1,599.1	1,682.9	1,561.7	1,055.8	1,392.7	1,449.6	1,534.3	1,602.2	1,365.6	1,445.3	1,103.8	1,368.1	1,539.4	1,348.6	1,447.3	1,436.8	1,515.9	1,423.8	1,422.3	1,347.9r	1,469.9
(17) Brass Mills - Metal Stocks & Other	-77.6	-23.4	-133.2	-15.8	-84.7	-61.1	-63.3	-61.2	-82.6	-112.8	-73.3	-155.6	-144.9	-119.1	-172.8	-11.8	-55.9	-23.3	-102.3	-25.9r	-31.9
(18) Brass Mills - Metal Contained in Products Supplied (Table 4, Item 16)	1,521.5	1,659.5	1,428.5	1,040.0	1,308.0	1,388.5	1,471.0	1,541.0	1,283.0	1,332.5	1,030.5	1,212.5	1,394.5	1,229.5	1,274.5	1,425.0	1,460.0	1,400.5	1,320.0	1,322.0r	1,438.0
(19) Foundries - Net Metal Consumed (page 17)	394.0	404.9	380.3	276.0	299.4	326.2	346.2	353.5	297.5	292.4	235.7	243.9	261.3	242.4	245.9	247.8	255.3	261.8	256.2	216.3r	230.1
(20) Foundries - Metal Stocks & Other	-2.0	5.1	-14.3	39.5	3.6	-5.2	-15.2	9.5	-11.5	-10.4	-13.7	5.1	-9.3	-7.4	-7.9	-9.3	-5.3	-24.8	-40.7	-14.8r	-37.1
(21) Foundries - Metal Contained in Products Supplied (Table 4, Item 17)	392.0	410.0	366.0	315.5	303.0	321.0	331.0	363.0	286.0	282.0	222.0	249.0	252.0	235.0	238.0	238.5	250.0	237.0	215.5	201.5r	193.0
(22) Powder Plants - Net Metal Consumed (p. 17)	34.6	41.3	36.6	21.8	34.4	36.5	37.4	36.6	26.0	26.1	21.7	26.8	26.9	25.0	24.5	26.2	26.8	27.5	27.0	22.9r	24.5
(23) Powder Plants - Metal Stocks & Other	-7.6	-9.3	-2.1	1.2	-1.9	-4.5	-9.4	-9.6	-7.0	-4.1	-4.7	-7.3	-5.4	-6.5	-7.0	-6.7	-4.8	-7.0	-8.0	-6.9r	-4.5
(24) Powder Plants - Metal Contained in Products Supplied (Table 4, Item 18)	27.0	32.0	34.5	23.0	32.5	32.0	28.0	27.0	19.0	22.0	17.0	19.5	21.5	18.5	17.5	19.5	22.0	20.5	19.0	18.0r	20.0
(25) Other Industries - Net Metal Consumed (page 17) [c]	125.1	116.5	99.0	99.7	140.9	158.6	167.5	182.1	167.5	159.2	116.7	109.7	113.9	113.3	118.9	122.4	125.3	128.0	125.5	106.3r	112.9

Sources: U.S. Department of the Interior, Bureau of Mines; ABMS.

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(a) - Direct consumption only; not including consumption of copper in ingots from ingot makers.

(b) - Ingot makers consume refined copper, scrap copper and alloying metal, and ship to foundries, brass mills, powder plants and other industries.

(c) - Chemical, steel, aluminum and other industries.

Table 3, Item 3.

Consumption of copper by wire rod mills, brass mills, ingot makers, foundries, powder plants and other industries

	COPPER CONTENT, thousands of short tons																				
	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992p
Consumption of Copper by:																					
Wire Rod Mills																					
Refined	1,526.3	1,672.3	1,474.3	1,061.3	1,364.0	1,511.2	1,672.7	1,653.0	1,442.8	1,597.9	1,359.0	1,399.8	1,658.6	1,545.1	1,644.6	1,757.0	1,837.8	1,872.1	1,822.6r	1,754.6	1,846.4
Scrap	18.3	17.3	15.9	11.4	14.6	15.0	15.3	17.1	15.0	15.8	12.6r	15.2	16.4	14.9	15.9	16.6	24.4	31.2	27.0	19.8	21.2
Total	1,542.6	1,689.6	1,490.2	1,072.7	1,378.6	1,526.2	1,688.0	1,670.1	1,457.8	1,613.7	1,371.6r	1,415.0	1,675.0	1,560.0r	1,660.5	1,773.6	1,862.2	1,903.3	1,849.6r	1,774.4	1,867.6
Brass Mills [a]																					
Refined	667.2	714.4	670.2	439.0	584.8	628.6	682.6	672.6	564.0	591.1	433.4	551.4	635.1	566.6	622.7	538.6	543.7	508.2	490.8	456.8r	503.2
Scrap	562.1	595.2	547.1	394.9	504.7	516.9	526.4	590.9	517.3	543.5	435.6r	525.7	567.4	514.3	546.9	589.3	646.5	613.0	637.3	597.7r	641.0
Total	1,229.3	1,309.6	1,217.3	833.9	1,089.5	1,145.5	1,209.0	1,263.5	1,081.3	1,134.6	869.0r	1,077.1	1,202.5	1,080.9	1,169.6	1,127.9	1,190.2	1,121.2	1,128.1	1,054.5	1,144.2
Ingot Makers [b]																					
Refined	6.0	6.1	9.2	4.5	7.5	6.6	8.2	6.9	5.5	6.0	4.8	4.9	7.6	5.9	5.8	5.8	6.2	6.3	6.2	5.2r	5.6
Scrap	250.5	236.7	215.0	164.0	173.0	195.0	205.5	238.2	214.0	213.0	173.2	176.4	219.5	202.4	200.6	201.6	213.2	218.4	214.0	181.7r	193.9
Total	256.5	242.8	224.2	168.5	180.5	201.6	213.7	245.1	219.5	219.0	178.0	181.3	227.1	208.3	206.4	207.4	219.4	224.7	220.2	186.9r	199.5
Foundries [a]																					
Refined	17.9	30.6	28.7	21.7	21.0	22.5	22.1	19.9	16.2	17.7	15.1	15.6	17.7	15.9	16.2	16.3	16.7	17.2	16.8	14.3r	15.2
Scrap	121.7	122.7	115.4	90.9	95.7	101.2	105.2	113.0	87.0	84.7	72.1	74.3	84.2	78.7	79.9	80.3	82.7	84.7	83.0	69.9r	74.3
Total	139.6	153.3	144.1	112.6	116.7	123.7	127.3	132.9	105.2	102.4	87.2	89.9	101.9	94.6	96.1	96.6	99.4	101.9	99.8	84.2r	89.5
Powder Plants [a]																					
Refined	9.5	12.7	12.0	6.8	11.8	11.3	11.5	11.6	8.3	8.3	7.5	8.5	8.7	8.1	7.9	8.5	8.7	9.0	8.8	7.5r	7.9
Scrap	16.0	17.3	17.7	11.6	16.8	18.3	18.5	18.1	12.8	12.9	10.1	13.2	13.1	12.2	11.9	12.8	13.1	13.5	13.2	11.2r	12.0
Total	25.5	30.0	29.7	18.4	28.6	29.6	30.0	29.7	21.1	21.2	17.6	21.7	21.8	20.3	19.8	21.3	21.8	22.5	22.0	18.7r	19.9
Other Industries [a,c]																					
Refined	10.7	12.2	9.1	9.0	8.4	13.0	24.6	22.0	20.0	16.1	14.6	16.6	12.2	16.7	17.6	18.1	18.5	18.7	18.4	15.6r	16.7
Scrap	76.4	65.3	56.9	57.5	77.7	88.1	100.5	107.9	102.1	104.2	66.1	59.3	66.6	61.7	64.7	66.6	68.2	69.9	68.5	58.0r	61.5
Total	87.1	77.5	66.0	66.5	86.1	101.1	125.1	129.9	122.1	120.3	80.7	75.9	78.8	78.4	82.3	84.7	86.7	88.6	86.9	73.6r	78.2
All Industries																					
Refined (Table 1, Item 16)	**2,237.6**	**2,448.3**	**2,203.5**	**1,542.3**	**1,997.5**	**2,193.2**	**2,421.7**	**2,386.0**	**2,058.8**	**2,237.1**	**1,834.4**	**1,996.8**	**2,339.9**	**2,158.3**	**2,314.8**	**2,344.3**	**2,431.6**	**2,431.5**	**2,363.6r**	**2,254.0r**	**2,395.0**
Scrap (Table 2, Item 9)	**1,043.0**	**1,054.5**	**968.0**	**730.3**	**882.5**	**934.5**	**971.4**	**1,085.2**	**948.2**	**974.1**	**769.7**	**864.1**	**967.2**	**884.2**	**919.9**	**967.2**	**1,048.1**	**1,030.7**	**1,043.0**	**938.3r**	**1,003.9**
TOTAL COPPER CONSUMED (Table 3, Item 3)	**3,280.6**	**3,502.8**	**3,171.5**	**2,272.6**	**2,880.0**	**3,127.7**	**3,393.1**	**3,471.2**	**3,007.0**	**3,211.2**	**2,604.1**	**2,860.9**	**3,307.1**	**3,042.5**	**3,234.7**	**3,311.5**	**3,479.7**	**3,462.2r**	**3,406.6r**	**3,192.3r**	**3,398.9**

Sources: U.S. Department of the Interior, Bureau of Mines; ABMS.

p - preliminary r - revised

(a) - Direct consumption only; not including consumption of copper in ingots from ingot makers.

(b) - Ingot makers consume refined copper, scrap copper and alloying metal, and ship to foundries, brass mills, powder plants and other industries.

(c) - Chemical, steel, aluminum and other industries.

Table 3, Item 8.

Consumption of alloying metal by brass mills, ingot makers, foundries and powder plants

	ALLOYING METAL CONTENT, thousands of short tons																			
	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992p
Consumption of Alloying Metal by:																					
Brass Mills [a]																					
Zinc-Slab	177.4	183.6	167.6	104.8	153.1	154.5	162.2	167.0	138.0	147.9	111.7	130.6	151.5	120.1	123.8	138.7	146.1	135.7	131.8	132.0r	146.6
Zinc in Scrap	156.2	149.2	132.6	94.7	124.5	125.5	139.8	147.3	122.1	122.3	98.9	128.0	148.5	117.7	121.3	135.9	143.2	133.0	129.1	129.3r	143.6
Lead-Refined	3.8	4.9	4.1	2.0	3.5	3.3	3.7	3.9	2.7	2.8	1.6	3.2	3.7	3.0	3.1	3.5	3.7	3.4	3.3	3.3	3.7
Lead in Scrap	3.6	3.6	3.3	2.3	3.4	4.5	3.8	4.0	3.3	3.1	2.4	3.4	3.9	3.2	3.3	3.7	3.9	3.6	3.5	3.5	3.9
Tin-Refined	1.0	1.1	1.1	0.6	0.8	0.7	0.8	0.8	0.8	0.8	0.4	0.5	0.6	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.6
Tin in Scrap	0.5	0.5	0.5	0.3	0.3	0.6	0.5	0.5	0.1	0.3	0.4	0.5	0.6	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.6
Nickel-Refined	6.5	5.4	7.1	7.5	5.5	4.6	4.8	7.6	8.4	11.3	3.5	5.3	6.1	5.0	5.2	5.8	6.1	5.7	5.5	5.5	6.1
Nickel in Scrap	4.1	10.5	4.2	4.1	3.8	3.1	2.2	3.1	1.8	2.6	1.9	3.2	3.7	3.0	3.1	3.5	3.7	3.4	3.3	3.3	3.7
Total	353.1	358.8	320.5	216.3	294.9	296.8	317.8	334.2	277.5	291.1	220.8	274.7	318.6	253.0	260.8	292.1	307.9	285.8	277.5	277.9r	308.8
Ingot Makers																					
Zinc-Slab	7.1	6.9	8.2	6.6	7.7	8.3	7.3	7.5	18.9	22.2	14.6	18.1	22.7	20.8	20.6	20.7	21.9	22.4	21.9	18.6r	19.8
Zinc in Scrap	33.9	29.4	28.2	20.8	26.8	29.1	25.0	25.2	9.9	12.2	14.2	17.6	22.1	20.3	20.1	20.2	21.4	21.9	21.5	18.3r	19.5
Lead in Scrap	16.2	18.0	18.1	13.4	16.9	19.7	19.2	19.4	17.1	17.5	16.5	16.8	21.0	19.3	19.1	19.2	20.3	20.8	20.4	17.3r	18.5
Tin in Scrap	19.1	12.5	12.5	9.3	11.4	13.3	12.4	12.5	11.0	11.3	9.2	9.4	11.8	10.8	10.7	10.8	11.4	11.7	11.5	9.8r	10.5
Nickel in Scrap	0.6	1.3	0.7	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4
Total	76.9	68.1	67.7	50.5	63.2	70.8	64.3	65.1	57.3	63.6	54.9	62.3	78.1	71.7	71.0	71.4	75.5	77.3	75.8	64.4r	68.7
Foundries [a]																					
Zinc-Slab	6.8	6.0	4.4	3.1	4.2	4.5	4.9	4.0	3.1	3.2	2.4	2.5	2.8	2.6	2.6	2.7	2.8	2.9	2.8	2.4r	2.6
Zinc in Scrap	2.8	2.7	3.5	3.0	4.1	4.2	5.6	5.2	4.2	4.0	3.2	3.3	3.7	3.4	3.4	3.5	3.6	3.7	3.6	3.0	3.2
Lead in Scrap	2.5	2.3	2.6	2.0	2.2	2.5	3.4	3.5	2.6	2.6	1.9	1.9	2.2	2.0	2.0	2.1	2.2	2.3	2.2	1.9r	2.0
Tin in Scrap	1.0	1.0	1.1	0.9	0.9	1.1	1.6	1.6	1.3	1.4	1.1	1.3	1.5	1.4	1.4	1.4	1.5	1.5	1.5	1.3r	1.4
Total	13.1	12.0	11.6	9.0	11.4	12.3	15.5	14.3	11.2	11.2	8.6	9.0	10.2	9.4	9.4	9.7	10.1	10.4	10.1	8.6r	9.2
Powder Plants [a]																					
Zinc-Slab	0.7	1.1	1.3	0.8	1.2	1.6	1.6	1.6	1.1	1.1	0.9	1.1	1.1	1.0	1.0	1.1	1.1	1.1	1.1	0.9	1.0
Zinc in Scrap	2.1	2.1	1.4	0.9	1.5	1.1	1.4	1.1	0.8	0.8	0.7	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.8
Tin-Refined	1.0	1.2	1.0	0.6	1.0	1.0	1.1	1.0	0.7	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6
Total	3.8	4.4	3.7	2.3	3.7	3.7	4.1	3.7	2.6	2.6	2.2	2.7	2.7	2.5	2.5	2.6	2.6	2.6	2.6	2.2	2.4
All Industries																					
Zinc-Slab	192.0	197.6	181.5	115.3	166.2	168.9	176.0	180.1	161.1	174.4	129.6	152.3	178.1	144.5	148.0	163.2	171.9	162.1	157.6	153.9r	170.0
Zinc in Scrap	195.0	183.4	165.7	119.4	156.9	159.9	171.8	178.8	137.0	138.3	117.0	149.8	175.2	142.2	145.6	160.4	169.0	159.4	155.0	151.3r	167.1
Lead-Refined	3.8	4.9	4.1	2.0	3.5	3.3	3.7	3.9	2.7	2.8	1.6	3.2	3.7	3.0	3.1	3.5	3.7	3.4	3.3	3.3	3.7
Lead in Scrap	22.3	23.9	24.0	17.7	22.5	26.7	26.4	26.9	23.0	23.2	20.8	22.1	27.1	24.5	24.4	25.0	26.4	26.7	26.1	22.7r	24.4
Tin-Refined	2.0	2.3	2.1	1.2	1.8	1.7	1.9	1.8	1.5	1.5	1.0	1.2	1.3	1.2	1.2	1.2	1.3	1.2	1.2	1.1	1.2
Tin in Scrap	20.6	14.0	14.1	10.5	12.6	15.0	14.5	14.6	12.7	13.0	10.7	11.2	13.9	12.7	12.6	12.7	13.5	13.7	13.5	11.8r	12.5
Nickel-Refined	6.5	5.4	7.1	7.5	5.5	4.6	4.8	7.6	8.4	11.3	3.5	5.3	6.1	5.0	5.2	5.8	6.1	5.7	5.5	5.5	6.1
Nickel in Scrap	4.7	11.8	4.9	4.5	4.2	3.5	2.6	3.6	2.2	3.0	2.3	3.6	4.2	3.5	3.6	4.0	4.2	3.9	3.8	3.7	4.1
TOTAL ALLOYING METAL CONSUMED (Table 3, Item 8)	446.9	443.3	403.5	278.1	373.2	383.6	401.7	417.3	348.6	368.5	286.5	348.7	409.6	336.6	343.7	375.8	396.1	376.1	366.0	353.1r	389.1

Sources: U.S. Department of the Interior, Bureau of Mines; ABMS.

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(a) - Direct consumption only; not including consumption of alloying metal in ingots from ingot makers.

Table 3, Item 12.

Net consumption of metals by wire rod mills, brass mills, foundries, powder plants, and other industries

	METAL CONTENT, thousands of short tons																				
	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992p
Net Metal Consumed by:																					
Wire Rod Mills-Copper (Table 3, Item 13)	1,542.6	1,689.6	1,490.2	1,072.7	1,378.6	1,526.2	1,688.0	1,670.1	1,457.8	1,613.7	1,371.6	1,415.0	1,675.0	1,560.0	1,660.5	1,773.6	1,862.2	1,903.3	1,849.6r	1,774.4	1,867.6
Brass Mills																					
Copper	1,229.3	1,309.6	1,217.3	833.9	1,089.5	1,145.5	1,209.0	1,263.5	1,081.3	1,134.6	869.0	1,077.1	1,202.5	1,080.9	1,169.6	1,127.9	1,190.2	1,121.2	1,128.1	1,054.5	1,144.2
Alloy	353.1	358.8	320.5	216.3	294.9	296.8	317.8	334.2	277.5	291.1	220.8	274.7	318.6	253.0	260.8	292.1	307.9	285.8	277.5	277.9r	308.8
Ingot	16.7	14.5	23.9	5.6	8.3	7.3	7.5	4.5	6.8	19.6	14.0	16.3	18.3	14.7	16.9	16.8	17.8	16.8	16.7	15.5r	16.9
Total (Table 3, Item 16)	1,599.1	1,682.9	1,561.7	1,055.8	1,392.7	1,449.6	1,534.3	1,602.2	1,365.6	1,445.3	1,103.8	1,368.1	1,539.4	1,348.6	1,447.3	1,436.8	1,515.9	1,423.8	1,422.3	1,347.9r	1,469.9
Foundries																					
Copper	139.6	153.3	144.1	112.6	116.7	123.7	127.3	132.9	105.2	102.4	87.2	89.9	101.9	94.6	96.1	96.6	99.4	101.9	99.8	84.2r	89.5
Alloy	13.1	12.0	11.6	9.0	11.4	12.3	15.5	14.3	11.2	11.2	8.6	9.0	10.2	9.4	9.4	9.7	10.1	10.4	10.1	8.6r	9.2
Ingot	241.3	239.6	224.6	154.4	171.3	190.2	203.4	206.3	181.1	178.8	139.9	145.0	149.2	138.4	140.4	141.5	145.8	149.5	146.3	123.5r	131.4
Total (Table 3, Item 19)	394.0	404.9	380.3	276.0	299.4	326.2	346.2	353.5	297.5	292.4	235.7	243.9	261.3	242.4	245.9	247.8	255.3	261.8	256.2	216.3r	230.1
Powder Plants																					
Copper	25.5	30.0	29.7	18.4	28.6	29.6	30.0	29.7	21.1	21.2	17.6	21.7	21.8	20.3	19.8	21.3	21.8	22.5	22.0	18.7r	19.9
Alloy	3.8	4.4	3.7	2.3	3.7	3.7	4.1	3.7	2.6	2.6	2.2	2.7	2.7	2.5	2.5	2.6	2.6	2.6	2.6	2.2	2.4
Ingot	5.3	6.9	3.2	1.1	2.1	3.2	3.3	3.2	2.3	2.3	1.9	2.4	2.4	2.2	2.2	2.3	2.4	2.4	2.4	2.0	2.2
Total (Table 3, Item 22)	34.6	41.3	36.6	21.8	34.4	36.5	37.4	36.6	26.0	26.1	21.7	26.8	26.9	25.0	24.5	26.2	26.8	27.5	27.0	22.9r	24.5
Other Industries [a]																					
Copper	87.1	77.5	66.0	66.5	86.1	101.1	125.1	129.9	122.1	120.3	80.7	75.9	78.8	78.4	82.3	84.7	86.7	88.6	86.9	73.6r	78.2
Ingot	39.0	39.0	33.0	33.2	54.8	57.5	42.4	52.2	45.4	38.9	36.0	33.8	35.1	34.9	36.6	37.7	38.6	39.4	38.6	32.7r	34.7
Total (Table 3, Item 25)	125.1	116.5	99.0	99.7	140.9	158.6	167.5	182.1	167.5	159.2	116.7	109.7	113.9	113.3	118.9	122.4	125.3	128.0	125.5	106.3r	112.9
All Industries																					
Copper	3,024.1	3,260.0	2,947.3	2,104.1	2,699.5	2,926.1	3,179.4	3,226.1	2,787.5	2,992.2	2,426.1	2,679.6	3,080.0	2,834.2	3,028.3	3,104.1	3,260.3	3,237.5	3,186.4r	3,005.4r	3,199.4
Alloy	370.0	375.2	335.8	227.6	310.0	312.8	337.4	352.2	291.3	304.9	231.6	286.4	331.5	264.9	272.7	304.4	320.6	298.8	290.2	288.7r	320.4
Ingot (Table 3, Item 10) [b]	301.3	300.0	284.7	194.3	236.5	258.2	256.6	266.2	235.6	239.6	191.8	197.5	205.0	190.2	196.1	198.3	204.6	208.1	204.0	173.7r	185.2
NET METAL CONSUMED																					
(Table 3, Item 12)	3,695.4	3,935.2	3,567.8	2,526.0	3,246.0	3,497.1	3,773.4	3,844.5	3,314.4	3,536.7	2,849.5	3,163.5	3,616.5	3,289.3	3,497.1	3,606.8	3,785.5	3,744.4	3,680.6r	3,467.8r	3,705.0

Sources: U.S. Department of the Interior, Bureau of Mines; ABMS.

p - preliminary r - revised

(a) - Chemical, steel, aluminum and other industries.

(b) - Total consumption of ingot shown here is less than the consumption of metal by ingot makers shown in the details of Table 3, Item 3 and Table 3, Item 8. The difference, shown as Ingot Stocks & Other in Table 3, is partially melting and other losses in the making of ingot.

Table 4

Supply of wire mill, brass mill, foundry and powder products and their consumption in the end-use markets

	METAL CONTENT, millions of pounds																				
	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992p
(1) Bare Wire	270	209	219	167	199	230	238	236	197	220	179	158	147	119	136	161	172	182	181	172	179
(2) Communication Wire and Cable	766	873	799	584	687	836	885	971	850	851	751	683	727	629	611	674	673	618r	608r	613r	604
(3) Building Wire	580	666	557	483	545	658	718	695	628	660	701	739	888	961	1,015	1,181	1,121	1,092r	1,144r	1,113r	1,180
(4) Magnet Wire	496	537	446	330	451	516	525	531	443	492	396	444	511	472	470	461	523	519	503r	490r	530
(5) Power Cable	273	306	303	222	214	241	245	270	280	275	247	218	243	259	255	268	289	339r	314r	273r	294
(6) Apparatus Wire and Cordage	169	185	177	139	161	196	202	202	205	189	157	199	227	203	203	231	199	197r	176r	168r	172
(7) Automotive Wire and Cable (except Magnet)	80	88	72	69	92	108	121	112	89	95	105	139	186	214	228	217	239	243	228	217	225
(8) Other Insulated Wire and Cable	79	68	78	75	67	72	81	77	85	93	94	73	81	71	82	94	70	72r	88r	86r	89
(9) Total Insulated Wire and Cable	2,443	2,723	2,432	1,910	2,217	2,627	2,777	2,858	2,580	2,655	2,451	2,495	2,863	2,809	2,864	3,126	3,114	3,080r	3,061r	2,960	3,094
(10) Total Wire Mill Products [a]	**2,713**	**2,932**	**2,651**	**2,077**	**2,416**	**2,857**	**3,015**	**3,094**	**2,777**	**2,875**	**2,630**	**2,653**	**3,010**	**2,928**	**3,000**	**3,287**	**3,286**	**3,262r**	**3,242r**	**3,132**	**3,273**
(11) Strip, Sheet, Plate and Foil	1,110	1,206	1,095	850	993	1,004	1,060	1,105	906	997	754	838	997	765	807	915	989	914	891	855r	922
(12) Mechanical Wire	128	126	105	65	92	94	104	112	80	82	61	69	73	63	66	67	69	68	67	66	65
(13) Rod and Bar	910	1,005	899	587	826	900	943	962	810	814	620	770	876	788	798	913	949	885	861	859r	963
(14) Plumbing Tube and Pipe	463	519	347	310	374	439	459	483	414	401	369	447	502	524	548	593	529	532	526	497r	529
(15) Commercial Tube and Pipe	432	463	411	268	331	340	376	420	356	371	257	301	341	319	330	362	384	402	295	367r	397
(16) Total Brass Mill Products (page 19)	**3,043**	**3,319**	**2,857**	**2,080**	**2,616**	**2,777**	**2,942**	**3,082**	**2,566**	**2,665**	**2,061**	**2,425**	**2,789**	**2,459**	**2,549**	**2,850**	**2,920**	**2,801**	**2,640**	**2,644r**	**2,876**
(17) Total Foundry Products	**784**	**820**	**732**	**631**	**606**	**642**	**662**	**726**	**572**	**564**	**444**	**498**	**504**	**470**	**476**	**477**	**500**	**474r**	**431r**	**403r**	**386**
(18) Total Powder Products	**54**	**64**	**69**	**46**	**65**	**64**	**56**	**54**	**38**	**44**	**34**	**39**	**43**	**37**	**35**	**39**	**44**	**41**	**38**	**32r**	**40**
(19) Domestic Products - Total	**6,594**	**7,135**	**6,309**	**4,834**	**5,703**	**6,340**	**6,675**	**6,956**	**5,953**	**6,148**	**5,169**	**5,615**	**6,346**	**5,894**	**6,060**	**6,653**	**6,750**	**6,578r**	**6,351r**	**6,211r**	**6,575**
(20) Net Imports of Mill Products (page 20)	**229**	**191**	**92**	**50**	**226**	**202**	**315**	**215**	**18**	**247**	**224**	**338**	**565**	**503**	**524**	**455**	**350**	**270**	**176r**	**38**	**5**
(21) Mill Products to Domestic Market*	**6,823**	**7,326**	**6,401**	**4,884**	**5,929**	**6,542**	**6,990**	**7,171**	**5,969**	**6,395**	**5,393**	**5,953**	**6,911**	**6,397**	**6,584**	**7,108**	**7,100**	**6,848r**	**6,527r**	**6,249r**	**6,580**
(22) Building Construction	2,218	2,389	1,935	1,556	1,874	2,123	2,291	2,320	1,935	2,037	1,857	2,197	2,568	2,587	2,719	3,047	2,908	2,796r	2,679r	2,573r	2,785
(23) Electrical and Electronic Products	1,749	1,880	1,721	1,176	1,495	1,694	1,803	1,915	1,666	1,772	1,489	1,517	1,699	1,472	1,533	1,633	1,660	1,632r	1,599r	1,567r	1,585
(24) Industrial Machinery and Equipment	1,164	1,241	1,115	821	964	1,044	1,139	1,159	1,009	1,084	849	906	995	898	899	942	993	967r	898r	824r	878
(25) Transportation Equipment	807	922	774	631	869	943	931	908	637	712	568	708	891	814	814	817	844	791r	739r	701r	741
(26) Consumer and General Products	885	894	856	700	727	738	826	869	722	790	630	625	758	626	619	669	695	662r	612r	585r	591

*Markets include - Building Construction: Building Wiring; Plumbing & Heating; Air Conditioning & Commercial Refrigeration; Builders' Hardware; Architectural.
Electrical & Electronic Products: Power Utilities; Telecommunications; Business Electronics; Lighting & Wiring Devices.
Industrial Machinery & Equipment: In-Plant Equipment; Industrial Valves & Fittings; Non-Electrical Instruments; Off-Highway Vehicles; Heat Exchangers.
Transportation Equipment: Automobile, Truck & Bus; Railroad; Marine; Aircraft & Aerospace.
Consumer & General Products: Appliances; Cord Sets; Military & Commercial Ordnance; Consumer Electronics; Fasteners & Closures; Coinage; Utensils & Cutlery; Miscellaneous.

Sources: U.S. Department of Commerce, Bureau of the Census ; IPC Technology/Marketing Research Council (Line 11-1983 on); Metal Powder Producers Assn. (Line 18-1978 on); CDA.
p - preliminary r - revised
(a) - Copper content.

Table 4, Item 16.

Supply of brass mill products in the United States

METAL CONTENT, millions of pounds

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992p
Strip, Sheet, Plate and Foil																					
Copper	274	315	297	230	255	264	267	297	234	262	202	245	302	242	248	289	302	287	287	256	274
Alloy	836	891	798	620	738	740	793	808	672	735	552	593	695	523	559	626	687	627	604	599r	648
Total	1,110	1,206	1,095	850	993	1,004	1,060	1,105	906	997	754	838	997	765	807	915	989	914	891	855r	922
Mechanical Wire																					
Copper	20	14	15	7	10	14	20	26	14	16	15	13	12	11	12	13	11	12	13	17	16
Alloy	108	112	90	58	82	80	84	86	66	66	46	56	61	52	54	54	58	56	54	49	49
Total	128	126	105	65	92	94	104	112	80	82	61	69	73	63	66	67	69	68	67	66	65
Rod and Bar																					
Copper	117	135	149	77	100	112	116	117	111	112	83	82	93	95	93	112	130	125	132	124r	129
Alloy	793	870	750	510	726	788	827	845	699	702	537	688	783	693	705	801	819	760	729	735	834
Total	910	1,005	899	587	826	900	943	962	810	814	620	770	876	788	798	913	949	885	861	859r	963
Plumbing Tube and Pipe																					
Copper	446	502	335	302	366	432	451	475	407	393	364	441	496	519	545	589	524	529	520	493r	523
Alloy	17	17	12	8	8	7	8	8	7	8	5	6	6	5	3	4	5	3	6	4	6
Total	463	519	347	310	374	439	459	483	414	401	369	447	502	524	548	593	529	532	526	497r	529
Commercial Tube and Pipe																					
Copper	305	322	265	171	221	239	280	322	273	284	195	234	277	267	276	305	328	347	243	310r	337
Alloy	127	141	146	97	110	101	96	98	83	87	62	67	64	52	54	57	56	55	52	57r	60
Total	432	463	411	268	331	340	376	420	356	371	257	301	341	319	330	362	384	402	295	367r	397
All Mill Products																					
Copper	**1,162**	**1,288**	**1,061**	**787**	**952**	**1,061**	**1,134**	**1,237**	**1,039**	**1,067**	**859**	**1,015**	**1,180**	**1,134**	**1,174**	**1,308**	**1,295**	**1,300**	**1,195**	**1,200r**	**1,279**
Alloy	**1,881**	**2,031**	**1,796**	**1,293**	**1,664**	**1,716**	**1,808**	**1,845**	**1,527**	**1,598**	**1,202**	**1,410**	**1,609**	**1,325**	**1,375**	**1,542**	**1,625**	**1,501**	**1,445**	**1,444r**	**1,597**
TOTAL BRASS MILL PRODUCTS	**3,043**	**3,319**	**2,857**	**2,080**	**2,616**	**2,777**	**2,942**	**3,082**	**2,566**	**2,665**	**2,061**	**2,425**	**2,789**	**2,459**	**2,549**	**2,850**	**2,920**	**2,801**	**2,640**	**2,644r**	**2,876**

Source: CDA. ; IPC Technology/Marketing Research Council (Copper Foil- 1983 on).

Supply of brass mill products in selected countries

METAL CONTENT, millions of pounds

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992p
Benelux	NA	329	304	258	316	335	306	314	299	266	232	209	235	234	210	168	201	220	247	242r	258
Canada	236	281	264	192	223	232	272	264	191	229	155	183	206	195	196	224	223	200	NA	NA	NA
France	598	667	603	476	569	586	590	638	657	615	600	567	617	561	546	543	609	619	618	612	602
Germany	1,130	1,311	1,157	932	1,219	1,207	1,219	1,337	1,403	1,277	1,256	1,378	1,546	1,511	1,560	1,621	1,748	1,798	1,805	1,911	1,959
Italy	572	626	654	520	647	639	652	650	734	694	668	697	767	809	873	922	1,087	1,186	1,211	1,337r	1,417
Japan	1,330	1,682	1,298	1,148	1,546	1,573	1,722	1,874	1,912	1,832	1,741	1,909	2,181	2,095	2,112	2,261	2,393	2,495	2,574r	2,717r	2,406
Scandinavia	286	316	316	247	285	295	321	348	340	320	324	346	380	357	372	389	410	411	433	390	367
South Korea [a]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	190	271	284	290	297	333	365	270
Spain	167	193	181	133	178	183	174	191	184	148	172	164	166	163	167	178	192	196	188	189	199
Switzerland	100	114	118	81	96	116	105	111	120	106	98	106	121	123	116	110	107	103	99	91	97
United Kingdom	905	1,004	903	737	803	827	845	797	644	563	597	565	620	601	577	577	568	544	521	454	421
United States	3,043	3,319	2,857	2,080	2,616	2,777	2,942	3,082	2,566	2,665	2,061	2,425	2,789	2,459	2,549	2,850	2,920	2,801	2,640	2,644r	2,876

Sources: World Bureau of Metal Statistics; CDA.

p - preliminary r - revised NA - not available (a) - Copper only.

Table 4, Item 20.

Imports and exports of wire mill, brass mill and powder products

METAL CONTENT, millions of pounds

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992p
Imports of:																					
Wire Rod	3.0	5.3	2.8	1.5	2.5	13.8	7.0	6.2	5.4	6.0	7.4	8.6	18.1	22.8	28.2	22.4	15.5	2.1	4.8	1.6	2.8
Bare Wire (including Stranded)	19.3	26.9	42.9	22.0	39.0	27.5	32.8	30.8	18.9	22.3	26.6	35.0	38.7	42.6	50.6	43.4	39.5	36.7	28.6r	16.8r	28.6
Insulated Wire and Cable	23.9	28.9	25.5	19.1	22.7	23.0	37.7	48.5	45.1	39.8	41.3	59.0	90.0	107.2	120.6	135.6	138.5	114.9	106.9	89.8r	94.8
Total Wire Mill Products	**46.2**	**61.1**	**71.2**	**42.6**	**64.2**	**64.3**	**77.5**	**85.5**	**69.4**	**68.1**	**75.3**	**102.6**	**146.8**	**172.6**	**199.4**	**201.4**	**193.5**	**153.7**	**140.3r**	**108.2r**	**126.2**
Copper-Strip, Sheet, Plate and Foil	45.7	48.7	46.9	37.8	59.9	64.7	85.8	80.1	54.1	71.8	59.1	67.6	103.8	82.4	77.3	80.7	83.0	75.9	86.2	79.2	72.6
Rod and Bar	6.1	6.0	6.7	4.2	6.6	8.0	17.5	17.0	12.0	12.4	9.3	9.2	13.1	14.0	10.7	11.0	17.4	11.5	8.2r	8.1r	10.5
Tube and Pipe	51.6	55.0	31.3	24.3	33.7	39.9	46.3	44.8	22.9	33.8	35.7	55.1	65.8	65.1	85.2	99.1	92.6	72.9	54.5r	35.5r	38.7
Alloy-Strip, Sheet, Plate and Foil	92.4	84.9	57.2	51.4	104.6	105.7	153.7	121.5	81.3	140.7	124.3	158.5	232.0	191.4	172.7	145.1	123.6	108.5	98.1	83.9	76.1
Mechanical Wire	4.3	5.7	4.1	2.6	6.3	7.9	9.9	9.7	7.9	10.4	10.3	11.7	14.8	13.2	22.8	24.5	26.0	26.8	25.3	21.7	28.5
Rod and Bar	12.5	17.9	16.2	11.7	41.7	33.4	51.9	48.3	26.3	121.9	51.4	47.8	83.0	51.0	55.8	64.6	74.6	75.7	61.2	44.3	44.7
Tube and Pipe	53.1	48.2	40.4	32.4	47.3	47.2	69.5	54.4	43.6	51.5	45.5	54.7	71.8	64.0	62.8	61.3	60.8	66.9	57.4	51.2	55.1
Total Brass Mill Products	**265.7**	**266.4**	**202.8**	**164.4**	**300.1**	**306.8**	**434.6**	**375.8**	**248.1**	**442.5**	**335.6**	**404.6**	**584.3**	**481.1**	**487.3**	**486.3**	**478.0**	**438.2**	**390.9r**	**323.9r**	**326.2**
Total Powder Products	**2.7**	**2.3**	**1.7**	**1.6**	**2.6**	**2.4**	**2.5**	**2.3**	**2.0**	**2.7**	**2.3**	**3.1**	**3.3**	**2.5**	**2.8**	**2.5**	**3.2**	**3.0**	**3.3**	**3.1**	**3.6**
TOTAL IMPORTS	**314.6**	**329.8**	**275.7**	**208.6**	**366.9**	**373.5**	**514.6**	**463.6**	**319.5**	**513.3**	**413.2**	**510.3**	**734.4**	**656.2**	**689.5**	**690.2**	**674.7**	**594.9**	**534 5**	**435.2r**	**456.0**
Exports of:																					
Wire Rod	10.9	10.4	14.0	10.9	8.5	11.2	13.0	30.9	53.5	30.7	18.2	12.5	13.2	5.2	16.8	23.0	35.0	31.0	21.9r	20.0	31.5
Bare Wire (including Stranded)	5.5	10.4	11.3	7.4	9.6	11.7	18.7	18.8	13.9	15.5	16.7	18.3	19.4	17.6	15.8	22.5	27.4	47.6	51.6	59.9	80.5
Insulated Wire and Cable	31.9	44.0	65.4	84.0	70.6	96.9	102.1	93.8	73.5	94.3	76.0	72.5	66.8	55.8	66.7	97.8	129.8	94.2	104.0	131.4	132.9
Total Wire Mill Products	**48.3**	**64.8**	**90.7**	**102.3**	**88.7**	**119.8**	**133.8**	**143.5**	**140.9**	**140.5**	**110.9**	**103.3**	**99.4**	**78.6**	**99.3**	**143.3**	**192.2**	**172.8**	**177.5r**	**211.3**	**244.9**
Copper-Strip, Sheet, Plate and Foil	0.9	1.8	2.2	0.8	1.4	4.2	2.9	3.3	6.7	7.3	4.0	3.1	8.7	8.1	2.7	3.4	10.5	8.6	17.1r	18.5r	22.9
Rod and Bar	1.7	4.4	2.7	8.1	1.4	2.6	6.0	12.0	37.0	10.0	13.8	4.0	3.1	2.8	2.0	8.2	3.0	4.0	5.9r	4.4	4.1
Tube and Pipe	2.3	15.5	13.5	4.4	5.1	6.2	5.8	18.8	38.9	24.1	10.1	8.0	9.5	10.0	11.8	14.3	22.1	44.7	35.3	44.6	43.6
Alloy-Strip, Sheet, Plate and Foil	7.9	12.2	14.5	6.4	8.3	8.6	9.0	10.4	17.3	28.4	10.2	11.6	11.7	15.8	11.4	16.9	34.5	21.2	36.9	34.2	32.6
Mechanical Wire	2.5	3.6	8.4	5.0	4.8	4.2	6.9	8.2	8.0	7.9	12.5	11.6	9.1	10.5	11.1	14.5	16.7	8.6	14.5	19.4	29.9
Rod and Bar	14.3	17.4	30.4	15.5	15.2	15.8	19.3	15.2	20.1	18.6	11.0	15.6	16.3	14.6	14.9	16.7	24.5	50.3	54.2	44.8	53.0
Tube and Pipe	4.1	13.7	16.0	13.2	12.4	7.0	12.0	32.9	31.0	26.6	14.1	13.9	10.0	9.9	9.7	12.9	15.6	9.4	11.2	12.9	13.1
Total Brass Mill Products	**33.7**	**68.6**	**87.7**	**53.4**	**48.6**	**48.6**	**61.9**	**100.8**	**159.0**	**122.9**	**76.0**	**67.8**	**68.4**	**71.7**	**63.6**	**86.9**	**126.9**	**146.8**	**175.1r**	**178.8r**	**199.2**
Total Powder Products	**3.7**	**5.0**	**5.4**	**2.5**	**3.7**	**3.5**	**3.8**	**3.9**	**3.9**	**2.5**	**2.1**	**1.7**	**1.9**	**2.5**	**3.0**	**4.9**	**5.8**	**5.4**	**5.4**	**7.3**	**8.5**
TOTAL EXPORTS	**85.7**	**138.4**	**183.8**	**158.2**	**141.0**	**171.9**	**199.5**	**248.2**	**303.8**	**265.9**	**189.0**	**172.8**	**169.7**	**152.8**	**165.9**	**235.1**	**324.9**	**325.0**	**358.9r**	**397.4r**	**450.6**
NET IMPORTS (Table 4, Item 20)	**228.9**	**191.4**	**91.9**	**50.4**	**225.9**	**201.6**	**315.1**	**215.4**	**15.7**	**247.4**	**224.2**	**337.5**	**564.7**	**503.4**	**523.6**	**455.1**	**349.8**	**269.9**	**175.6r**	**37.8r**	**5.4**

Sources: U.S. Department of Commerce, Bureau of the Census; Copper & Brass Fabricators Council, Inc.; CDA.
p - preliminary r - revised

COPPER DEVELOPMENT ASSOCIATION INC.
260 Madison Avenue, New York, NY 10016

2013-0929